

MOUTHCARE (ORAL HEALTH) NURSING GUIDELINE


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1.0 Introduction

The mouth is the major portal of the body and it can be a source of disease if its integrity is compromised (Dental Health Foundation 2009). Mouthcare / Oral Health is considered an essential part of nursing care and ensuring oral health is recognised as a key quality priority for health and wellbeing (Grap *et al.* 2003, NICE 2014). The nurse plays an integral role in the assessment, care, maintenance and promotion of good oral health (Sargeant and Chamley 2013).

Rationale for Mouthcare

- Keep the mouth clean, moist and maintain oral function
- Prevents infection
- Reduce the risk of ventilator associated pneumonia (VAP) in the ventilated patient (Berry *et al.* 2011)
- Keep lips clean, intact and moist
- Remove and prevent buildup of dental plaque without damaging the gingiva
- Remove food debris from gums and teeth
- Prevention of dental caries
- To freshen the mouth and prevent halitosis
- Prevent of infection / stomatitis
- Alleviate pain and discomfort thereby encouraging an oral intake if permitted
- Promotion of infant/childs' dignity comfort and well-being (Abidia 2007, Cardiff PICU 2007, Gibson and Nelson 2000)


Oral Health

Good oral health is essential for general well-being and a good quality of life (WHO 2012, Couch Mead and Walsh 2013). It can be viewed as a state of being free from pain, infection and cancer in the mouth. Other vital components include: being free from periodontal disease; caries and tooth loss, and any other disease that can affect a person's ability to bite, chew, smile, speak or impact on their psychosocial wellbeing (WHO 2012). The purpose of this guideline is to provide nurses with the necessary evidence based information to promote, assess and assist in the maintenance of good oral health in the patients within their care.

Poor Oral Health

There are numerous abnormalities that can occur in the oral cavity affecting the teeth, gums and other structures in the mouth. Dental caries, often referred to as tooth decay, is a disease that impacts on an individual's quality of life. It results in pain, infection, loss of sleep, difficulty eating and drinking, missed school days and can impact on general health (Bach and Manton 2014, Do *et al.* 2014, Moyer 2014). Caries develops when sugars interact with the bacteria in plaque producing acid, which over time breaks down the enamel creating a cavity (Royal College of Surgeons, 2015; Dental Health Foundation 2014g). Decay is caused by the frequent intake of sugar and poor oral hygiene. Despite the fact that it is largely preventable, caries remains the most prevalent chronic disease of childhood. 60-90% of five-year-old children experience decay (Cooper *et al.* 2013).

The gingiva (gums) provide a supporting structure for the teeth (Nelson 2009). The gingiva can become swollen, painful and bleed easily, often associated with poor oral hygiene or as a consequence of an underlying condition, for example neutropenia, diabetes or crohn's disease (Philstrom Michalowicz and Johnson 2005). Gingivitis is inflammation of the gums that is caused by dental plaque accumulating on the teeth adjacent to the gingiva. It is characterised by red, swollen gums that are prone to bleeding.

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Gingivitis does not affect the supporting function of the gingiva and is reversible. Periodontitis is more severe and can lead to a loss of the connective tissue and bone that supports the teeth, which can in turn lead to tooth loss (Philstrom Michalowicz and Johnson 2005).

Other structures within the oral cavity include the tongue, lips, cheeks and the hard and soft palate. There are numerous oral mucosal conditions that can affect these structures such as ulceration, orofacial granulomatosis and infections, for example candida and the herpes simplex virus (Hussey *et al.* 2011, Viera-Andrade 2013). Oral mucosal abnormalities can be as a result of trauma, associated with other conditions or indeed be idiopathic (Dowst-Mayo 2013, Hussey *et al.* 2011, Edwards and Kanjirath 2010).

Diet and Oral Health

The relationship between diet and dental caries has long been investigated. Eating and drinking patterns can have a significant impact on an individual's oral health. A seminal study by Gustaffson *et al.* (1954) found that the frequency of sugar intake between meals was linked to an increase in dental caries. Evidence suggests that there is a link between caries and the frequency of sugar consumption (Holt 1991, Bach and Manton 2014).

Sugary Drinks

There is more attention being placed on 'sugary' drinks in recent years. Sugary drinks including fruit juices, fizzy drinks, cordials, squashes and smoothies, particularly when consumed between meals can significantly contribute to caries (Bach and Manton 2014).

Feeding Bottle

Inappropriate use of a feeding bottle has a very significant negative impact on oral health. The constant or frequent sipping of sugar-sweetened beverages has been identified as a major contributor to caries. The World Health Organization (WHO 2003) warn of the dangers of allowing a child to drink at will from a bottle containing sweetened liquids and allowing a child a drink, other than water in bed. These scenarios result in the almost continual bathing of the teeth in sugar (WHO 2003, Dental Health Foundation 2014g).


Recommendations to Reduce the Risks of Oral Health Complications from Dietary Habits

- Encourage 3 meals and no more than, 2 to 3 snacks per day
- Outside of these times only milk or water should be offered
- Only water should be offered at night
- Sugary foods and drinks should be given as treats and only at mealtimes
- Only ever put milk or water in a baby feeding bottle, never sugary drinks
- Encourage drinking liquids from a cup
- Discontinue the use of a feeding bottle by the time a child is 1 year of age
- Never allow a child to sleep with a bottle in his or her mouth
- "Children should be fed and put to bed – NOT put to bed and fed"
- Use sugar free medicines when available (HSE UCC and HRB 2009, Dental Health Foundation 2014a)

2.0 Oral Assessment

The use of a validated oral assessment tool (OAT) can improve assessment and compliance regarding mouthcare (Cason *et al.* 2007, Garcia *et al.* 2009, Berry *et al.* 2011).

ACTION	RATIONALE AND REFERENCE
<p>Use a standardised oral assessment tool, which includes the teeth, gums, tongue, mucous membranes and lips.</p> <p>General Wards: Oral Assessment Tool 1 (Appendix I) PICU: Oral Assessment Tool 2 (on ICIP) (Appendix II) St John's Ward (Immune-compromised Haematology / Oncology Patients): Oral Assessment Tool 3 (incorporating Mucositis Grading Scale). (Appendix III and Appendix IV).</p> <p>Assess infant / child's mouth using Oral Assessment Tool (OAT) 1, 2 or 3 on admission and thereafter as clinically indicated.</p> <p>Children at risk of poor oral hygiene include:</p> <ul style="list-style-type: none"> • Nil by mouth / Post-operative Patient • Immuno-compromised • Receiving Antibiotics • Oral / Facial Surgery • Congenital Heart Disease • Gastro-intestinal Patients e.g. Crohn's Disease • Altered nutrition / Failure to Thrive <p><i>NB: Thus list is not exhaustive</i></p> <p>Explain assessment procedure to child as clinically indicated.</p> <p>Ensure good lighting to perform the assessment i.e. use pen torch.</p> <p>Perform assessment procedure using non-sterile gloves.</p> <p>Decontaminate hands.</p> <p>Document procedure and assessment.</p>	<p>To ensure best practice and a thorough systematic oral assessment, planning and evaluation of care (Johnson <i>et al.</i> 2010, Berry <i>et al.</i> 2011). Oral abnormalities are often quickly identified on assessment. It provides a baseline for nursing care, allows monitoring of response to treatment and timely identification of changes in the condition of the infant / child's mouth (Abidia 2007, PICU Cardiff 2007).</p> <p>OAT is a validated oral assessment tool for use in children (Eiliers <i>et al.</i> 1988). (Hayes and Jones 1995, Johnson <i>et al.</i> 2010, McNeill 2000, O'Reilly 2003, AACN 2010).</p> <p>To ensure good visualisation of the mouth (MacQueen <i>et al.</i> 2012).</p> <p>Universal precautions and to minimise cross infection (MacQueen <i>et al.</i> 2012).</p> <p>Reduce cross infection (2011)</p> <p>Continuity of patient care (NMBI 2016).</p>

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3.0 Mouthcare in the Infant / Child

NB: use OAT I (Appendix I)

Oral Hygiene

Good oral hygiene is essential to good oral health and general well-being. The main goal is the removal of plaque from all surfaces of the teeth.

Tooth brushing

The Dental Health Foundation (2014b) recommend that tooth brushing begin as soon as a child's first tooth appears and continues for life. It is an important part of daily care and should be carried out twice per day. All surfaces of the teeth should be cleaned with a small, soft toothbrush. Children should have their own toothbrush and it should never be shared. A pea sized amount of fluoride toothpaste, containing 1450 parts per million of fluoride should be used for all children 2 years and over (Dental Health Foundation 2014b).

The fluoride concentration is written on the packaging of all fluoridated toothpastes. Children under 7 should be helped to brush their teeth. Some children may need to be helped for a longer period. When a child is competent to carry out tooth brushing themselves, they should continue to be supervised. This is to ensure it is carried out effectively and to avoid the over ingestion of fluoride.

Children under 2 Years of Age

- Use a small soft toothbrush and water twice per day, morning and night (Dental Health Foundation 2014b).

Children over 2 Years of Age

- Use a small soft toothbrush with a pea sized amount of fluoride toothpaste twice per day, morning and night.



Figure 1: Correct amount of toothpaste (Audiovisual, OLCHC 2015).

- Spit out toothpaste, do not rinse. This leaves a thin film of fluoride on the teeth, which is helpful in protecting the enamel. Rinsing with water reduces the caries preventive effect found in fluoride toothpaste (Scottish Intercolliate Guideline Network 2014).
- Brush teeth for children 7 years and under to ensure correct technique and prevent the over ingestion of fluoride.
- Supervise tooth brushing over 7 years
- **DO NOT** allow the child to swallow large amounts of fluoride toothpaste. This increases the risk of fluorosis (white spots or opacities on the tooth enamel) (GOSH 2014)

Effective Tooth Brushing Technique

- Use a soft bristled toothbrush with a head small enough to reach all areas of the teeth.
- The toothbrush should be positioned at a 45-degree angle to the gum line to clean the inner and outer surfaces of the teeth.
- To clean the inner surfaces of the top and bottom front teeth, turn the toothbrush to a vertical position.
- Ensure the biting surfaces of the molar teeth are also cleaned.
- Use several short strokes, moving the toothbrush back and forth when cleaning all surfaces of the teeth. (American Dental Association 2014a).

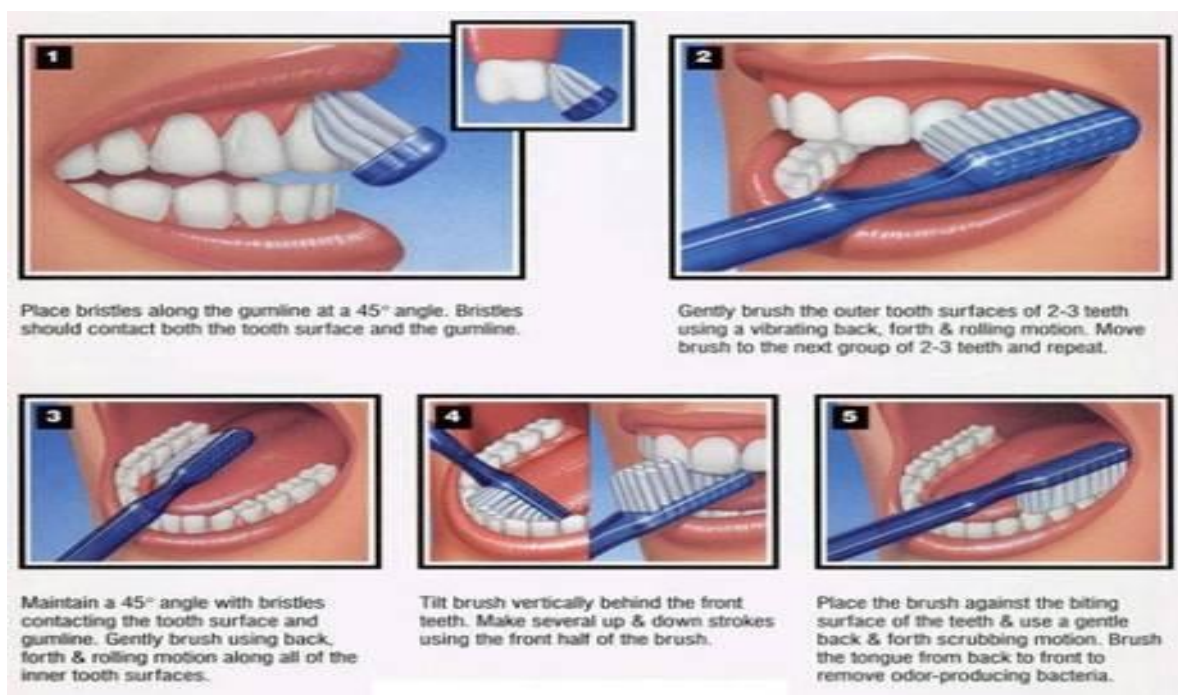


Figure 2: Correct tooth brushing technique (Google images, no copyright holder identified)

4.0 Mouthcare in the Ventilated Infant / Child in PICU

NB: use OAT 2 (Appendix II)

The oropharyngeal flora of critically ill patients changes from predominately-positive organisms to predominantly gram negative organisms, within 48 hours of admission. This bacterial flora is more virulent and migrates to the lungs resulting in hospital-acquired pneumonia. There is also a higher risk in the intubated patient because the endotracheal tube provides a pathway for bacteria into the child's lungs (Johnson *et al.* 2010). Medication used in PICU i.e. inotropes, diuretics, anticholinergics, sedatives/ anaesthetic, anticonvulsants, antihistamines and antihypertensive agents may increase the risk of the child developing reduced saliva flow (xerostomia) thus altering the mouths primary cleansing method. This may be further exacerbated by dehydration and stimulation of the sympathetic nervous system (McNeill 2000, Munro *et al.* 2004). The infant / child in PICU is also at greater risk of nosocomial infection due to other factors i.e. supine position, lack of elevation of head of bed, fluid restriction, dental plaque, young age, immunocompromised, decreased mobility, ineffective / absent gag and cough reflex, poor nutrition, enteral feeding and presence of a naso-gastric tube (Grap *et al.* 2003, Johnson *et al.* 2010).

Research has demonstrated that there is a significant increase in plaque accumulation and gingival inflammation from PICU admission to discharge (Franklin *et al.* 2000). Inadequate oral hygiene has been associated with an increase in dental plaque, bacterial colonisation of the oropharynx and an increase in ventilated associated pneumonia (VAP). VAP is also one of the most important nosocomial infections in critical care and the second most common cause of nosocomial infection in PICU children. It also contributes to increased length of hospital stay and mortality. Research indicates that reducing oropharyngeal colonisation, reduces the pool of organisms that may contribute to VAP (Franklin *et al.* 2000, Grap *et al.* 2004, Gardia *et al.* 2009, Pedreira *et al.* 2009, AACN 2010, Johnson *et al.* 2010, Stonecypher 2010, Berry *et al.* 2011). Effective Mouthcare is therefore an important strategy in reducing nosocomial pneumonia in the critically ill patient (Bingham *et al.* 2010, Rello *et al.* 2010, Berry *et al.* 2011).

Equipment

- Small torch
- Wooden spatula
- Sterile Water
- Suction toothbrush in the PICU patient
- Yaunker suction
- Clean bowl or receiver
- Paper tissues
- Non-foaming (sodium laurel sulphate free) toothpaste
- Gauze
- Vaseline
- None-sterile gloves (Dougherty and Lister 2015)

ACTION	RATIONALE AND REFERENCE
<p>Wash / decontaminate hands.</p> <p>Explanation to child as appropriate.</p> <p>Collect equipment.</p> <p>Use a soft bristled toothbrush i.e. Dr Barman or TePe toothbrush for intubated dentate children every 12 hours to brush their teeth in conjunction with yaunker sucker (Appendix II).</p>	<p>To prevent cross infection, universal precautions (Fraise and Bradley 2009, OLCHC 2010, 2011).</p> <p>To inform the child and gain their cooperation and trust (Ball Binder and Cowen 2011, Hockenberry and Wilson and Rodgers 2018).</p> <p>To aid the procedure (Dougherty and Lister 2015).</p> <p>To remove debris, plaque and assist in decreasing microbial colonisation (Garcia 2009, Berry <i>et al.</i> 2011). The tooth brush is more effective and superior in removing dental plaque and gingival stimulation when compared to a foam swab (Franklin <i>et al.</i> 2000, Pearson and Hutton 2002, Munro and Grap 2004, Garcia 2009, AACN 2010).</p>

<p>Apply a smear of toothpaste containing 1450-ppm fluoride, before brushing teeth for of minimum of 2 minutes.</p> <p>Brush the tongue gently also.</p> <p>Non foaming (sodium lauryl sulphate free) toothpaste is preferable. Suction out excess toothpaste but do not rinse.</p> <p>Rinse toothbrush after use and allow to dry to air. Keep oral care equipment and toothbrush in a designated container.</p> <p>Clean mouth with soft bristled toothbrush or gauze moistened with Sterile Water TM for Injection for infants whose teeth have not erupted and all patients who are nil by mouth every 2 hours.</p> <p>Use gauze only, wrapped around little finger to moisten the mouth a minimum of every 2 hours as clinically indicated (Appendix II). This may be the preferred method in patients where tooth brushing is contraindicated i.e. bleeding gums related to thrombocytopenia.</p> <p>Expressed Breast Milk (EBM) / Colostrum EBM / Colostrum SHOULD BE used for mouthcare in preference and instead of water, for the neonate / infant.</p>	<p>To ensure thorough and effective cleaning of the child's teeth (Johnson <i>et al.</i> 2000 Berry <i>et al.</i> 2009, MacQueen <i>et al.</i> 2012). Fluoride in toothpaste has been proved to reduce dental caries (Johnson <i>et al.</i> 2010, Dental Health Foundation 2014b).</p> <p>The tongue is normally abraded during normal eating and this does not occur in the intubated patient (Christensen 1998). The tongue is coated with millions of organisms, which contribute to halitosis. Tongue brushing reduces this incidence (Christensen 1998).</p> <p>Non-foaming toothpaste is easier to clear from the mouth (Berry and Davidson 2006).</p> <p>To prevent contamination (Jones 1998, Berry <i>et al.</i> 2009).</p> <p>Tooth brushing is beneficial in removing debris and subsequently reducing colonisation of dental plaque (Halm and Armola 2009).</p> <p>Tap water is not recommended for routine oral care in the critically ill patient because of the potential risk for hospital taps and pipes to become colonised with microbial organisms (Trautman <i>et al.</i> 2001, Anaissie Penzak and Dignani 2002, Muscarella 2004, Department of Health 2012).</p> <p>Normal saline may promote healing of lesions of the oral mucosa but it also has a drying effect and routine use is not recommended (Berry and Davidson 2006).</p> <p>Gauze is only effective for mucosal tissue stimulation (Grap <i>et al.</i> 2003, Johnson <i>et al.</i> 2010). Water is inexpensive and has minimal side effects (O'Reilly 2003).</p> <p>EBM / Colostrum increases the neonate/ infants' immunity and protects against infection.</p>
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Oral Immune Therapy (OIT)

Oral immune therapy is also recommended in addition to oral care: for all suitable infants who are 'nil by mouth'.

OIT can be continued until infant is on full oral feeds.

Draw up freshly expressed colostrum/ breastmilk into 2 x 0.1ml doses using 1ml enteral syringes. 0.1ml is inserted into each cheek every 4-6 hours.

Administer over 30 seconds approximately, prior to completing administration. This allows milk to be absorbed and prevents pooling.

NB: Fortified EBM is unsuitable (Dewhurst 2010)

NB: EBM / Colostrum as oral care is contradicted: when infant has a repogyle tube; confirmed or suspected galactosemia disease.

Liaise with consultant intensivist / surgeon.

NB: DO NOT USE foam swabs as they are contraindicated in all children because of the identified risk of choking.

NB: DO NOT USE lemon and glycerine swabs.

NB: Chlorhexidine 0.12% Oral Rinse may be useful pre-operatively in adult cardiac patients only.

Oral care using colostrum or breast milk has been identified as having potential to serve as immune therapy for the infant. Colostrum and breastmilk contain bio factors such as lactoferrin, immunoglobulins, growth factors, antioxidants and multiple protective substances. These bio factors have the ability to protect the infant against infections such as late onset sepsis and NEC. The particular influence of Colostrum/EBM on infant's oropharynx is unique and important. When cells in the oropharyngeal cavity (oropharyngeal-associated lymphoid tissues-OFALT) come in contact with bio factors; the immune system is stimulated and gut maturation occurs (Gephart, and Weller 2014, Rodriguez *et al.*, 2015).

Oral administration of a total of 0.2ml in extremely low birth weight infants demonstrated a high level of tolerance (Rodriguez *et al.* 2015).


Benefits include stimulates non-nutritive sucking; reduces oral aversion and calms and soothes the infant.

The mixing of breastmilk and saliva has also been shown to inhibit microbial growth such as *Staphylococcus aureus* in the oral cavity, reducing risk of infection, such as ventilator-associated pneumonia (VAP) (Al-Shehri *et al.* 2015, Sweeney *et al.* 2018).

(Roberts 2000, MHRA 2012).

These swabs initially cause salivation production but then cause rebound xerostomia. They can also cause irritation and demineralisation of tooth enamel because of their acidity (Berry *et al.* 2011, Johnson *et al.* 2010).

Chlorhexidine 0.12% may be effective in reducing oropharyngeal colonisation and VAP in

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<p>Apply Petroleum Jelly (Vaseline), Lanolin or oral moisturising to lips, minimum 2-4 hourly as clinically indicated.</p>	<p>adult cardiac patients (Pinede <i>et al.</i> 2006, Halm and Armola 2009).</p> <p>There is no evidence in the literature to support use in paediatrics (Pedreira <i>et al.</i> 2009, Jacomo <i>et al.</i> 2011, Kusahara 2012, Kusahara Peterlini and Pedreira 2012, Klompas <i>et al.</i> 2014).</p> <p>To keep lips moist and prevent lip dehydration. Intubated patients are at high risk of drying and cracking of their lips because they are unable to naturally moisten them using the tongue. Vaseline and lanolin also reduce trans epidermal water loss due to its occlusion effect and retains moisture (Berry and Davidson 2009, AACN 2010, GOSH 2014).</p>
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5.0 Mouth Care in the Haematology Oncology Patient

NB: use OAT 3 (Appendix III)


Despite advances in chemotherapy and radiotherapy, cancer treatment still remains associated with clinically important, sometimes dose-limiting, side effects e.g. mucositis, candidiasis (and other fungal infections), xerostomia, salivary gland damage and Herpes virus infection. Chemotherapy and radiation induced toxicity affect rapidly dividing cells. The oral mucosa is therefore very susceptible to damage.

Oral complications occurring during and following cancer treatment are common and can cause pain, difficulty in swallowing, speech and poor nutrition (Miller *et al.* 2012). Secondary complications such as dehydration and malnutrition can occur. The oral cavity can be a source of systemic infection in myelosuppressed patients and can impact severely on a patient's quality of life (NCI 2014).

Mouth care for paediatric haematology / oncology patients is an important aspect of care with the principle objective of ensuring the child's mouth is clean, moist and free from infection. Regular and thorough mouth care is vital in all children, even if they are not eating (Hogan 2009). All children should undergo a dental assessment by a paediatric dentist at the time of cancer diagnosis or before cancer treatment or haematopoietic stem cell transplant, to prevent significant dental disease compromising the patient (UKCCSG – PONF Mouth Care Group 2006, NCI 2008, OLVHC 2013).

Oral assessment should be performed on each admission and daily whilst on chemotherapy using a systematic and thorough approach to monitor changes and implement appropriate treatment (Wohlschlaeger 2004) using the Oral Assessment Tool 3, grade mucositis. Pain assessment should be undertaken to ensure adequate pain control.

Opiate analgesia may be required for the control of severe pain /mucositis (OLVHC 2001). The dental team should be notified of any oral problems. An oral assessment should be undertaken every six months by a member of the dental team. (OLVHC 2013, Yavuz and Yilmaz 2015).


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Oral hygiene advice both verbal and written should be given to children and parents prior to commencing chemotherapy treatment. Each patient is given a "Passport – Parent Held Record" with information within (OLCHC 2013, Yavuz and Yilmaz 2015). General mouth care advice as in Section 3. The child's toothbrush should be for the sole use of the child and changed on a three monthly basis. A child's toothbrush should be changed following an oral infective episode.


Please NOTE # Bone Marrow Depression – there is a risk of bleeding if patient is thrombocytopenic. If unable to brush, rinse with water or use gauze swabs with water and consult with the dental team for advise. Patients who are neutropenic and febrile, will require antibiotic therapy as per Febrile Neutropenic Policy (OLCHC 2013).

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7.0 Glossary of Terms

Candidiasis (Oral Thrush)

This is caused by a yeast like fungus, *Candida Albicans*, which normally inhabits the digestive track and vagina. It causes soft white plaques on the tongue and mucosa.

Dental Plaque

Dental plaque (biofilm) is a colourless sticky naturally occurring film of bacteria and saliva proteins, which adheres to the surface of teeth. It cannot be removed with water and it requires tooth brushing. Dental plaque, if not removed results in tooth decay and gum disease.

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Gingivitis

Inflammation of the gingival (gum) of the mouth. The commonest cause is plaque related i.e. bacterial plaque on adjacent teeth. Other causes include leukaemia or steroid induced. It is characterised by oedema, erythema and fibrous bleeding of the gingiva. Effective oral hygiene is required immediately because within 72 hours there is a shift to increasing numbers of anaerobic gram-negative bacilli.

Halitosis

Bad breath (oral malodour) is caused by bacteria, which produces excessive amounts of volatile sulphur compounds (VSCs).

Mucositis

Mucositis is a toxic inflammatory reaction occurs that develops along the entire gastro-intestinal tract as a result of radiotherapy or chemotherapy. In the mouth it presents as redness, ulceration and sloughing of tissues. It is a common side effect of cancer treatment.

Oral Immune Therapy

This is the practice of using colostrum / EBM as an adjunct to oral care in the neonate/ infant. It supports and stimulates the development of the infants' immune system and boosts protection from infection.

Saliva

Oral tissues and teeth are constantly bathed by saliva, which is secreted by the salivary glands. Its presence is vital to oral health. The production of saliva increases during eating and it acts as a buffer neutralising acids thus preventing tooth decay. Other functions include acts as a solvent to facilitate taste; lubricates and protects mucosa from irritation; facilitates speech and swallowing; anti-microbial and protects tooth enamel from salivary proteins.

Stomatitis

Inflammation and infection of the mucous membranes of the mouth. It is a painful condition and there may or may not be ulceration.

Ulceration

Ulcers, which are white, small and punched out lesions on epithelial surfaces of the mouth, probably caused by a virus.

Xerostomia

A dry mouth, which is caused by, reduced or absent saliva flow.

(Dental Health Foundation 2014c, 2014d, 2014e, 2014f, Gephart and Waller 2014, SIGN 2014).

8.0 Appendices - Appendix 1 - Oral Assessment Tool 1



Oral Assessment Tool 1 For Infants & Children in Ward Areas

- Use Oral Assessment Tool 1 (for the wards)
- Use Oral Assessment 2 (PICU's)
- Use Oral Assessment Tool 3 (St. Johns and HODU)

First Name:
Surname: *Addressograph*
HCR No:

Oral Assessment Tool 1										
Date										
Signature										
NMBI										
Time										
Soft Lips										
0 = Smooth, pink, moist										
1 = Dry or cracked										
2 = Ulcerated or bleeding										
Tongue										
0 = Pink, moist, papillae present										
1 = Coated or loss of papillae										
2 = Blistered or cracked										
Other, white spots, ulcers <i>(please detail)</i>										
Mucous Membrane										
0 = Pink and moist										
1 = Reddened or coated										
2 = Ulcerated +/- bleeding										
Other, white spots, ulcers <i>(please detail)</i>										
Gingiva / Gums										
0 = Pink and moist										
1 = Oedematous / Redness										
2 = Spontaneous bleeding										
Other, white spots, ulcers <i>(please detail)</i>										
Teeth (if no teeth, score 1)										
0 = Clean and no debris										
1 = Localised plaque or debris										
2 = Generalised plaque / debris										
Dental Pain										
0 = No pain										
1 = Mild pain (Pain Tool)										
2 = Severe pain										
<i>Please use Pain Score as per Observations Chart (note location of pain)</i>										
If a score of 2 is given for any field, consider medical and / or dental review										
GUIDANCE										
1			All patients have an oral assessment with their admission assessment, use this tool to guide daily practice							
2			If obvious oral hygiene needs, place the assessment tool in the patient end of bed notes for daily use.							
3			Calculate a score per area and detail the score in the section provided							
4			If a score of 2 is given to any area, consider referral to the dental department for review							
5			Detail the assessment in Careplan 1 and suggest evaluation							
6			See overleaf for daily dental hygiene guidance for infants and children							

Adapted from Eilers et al 1988

Created by Oral Assessment Team – CHI at Crumlin, Dublin 12 – Issue Date: 10.10.20

Appendix 2 - Oral Assessment Tool 2 (PICUs)



Oral Assessment Tool 2 For PICU1 & PICU2 only

First Name:
Surname: <i>Addressograph</i>
HCR No:

- Use Oral Assessment Tool 1 (for the wards)
- Use Oral Assessment 2 (PICU's)
- Use Oral Assessment Tool 3 (St. Johns and HODU)

ORAL ASSESSMENT 2									
	Date								
	Signature								
	NMBI								
	Time								
Voice									
	1 = Normal								
	2 = Deep or raspy								
	3 = Difficulty talking/painful/crying								
Swallow									
	1 = Normal								
	2 = Pain on swallowing								
	3 = Unable to swallow/drooling								
Lips									
	1 = Smooth, pink, moist								
	2 = Dry or cracked								
	3 = Ulcerated or bleeding								
Tongue									
	1 = Pink, moist, papillae present								
	2 = Coated or loss of papillae								
	3 = Blistered or cracked								
Mucous Membrane									
	1 = Pink and moist								
	2 = Reddened or coated								
	3 = Ulcerated +/- bleeding								
Saliva (Consistency)									
	1 = Normal								
	2 = Watery								
	3 = Thick and ropey								

Appendix 3 - Oral Assessment Tool 3 (Haematology / Oncology Patients)



Oral Assessment Tool 3 For St. Johns and HODO only

- Use Oral Assessment Tool 1 (for the wards)
- Use Oral Assessment 2 (PICU's)
- Use Oral Assessment Tool 3 (St. Johns and HODO)

First Name:

Surname: *Addressograph*

HCR No:

Oral Assessment 3									
Date	Signature	NMBI	Time						
Voice									
1 = Normal									
2 = Deep or raspy									
3 = Difficulty talking/painful/crying									
Swallow									
1 = Normal									
2 = Pain on swallowing									
3 = Unable to swallow/drooling									
Lips									
1 = Smooth, pink, moist									
2 = Dry or cracked									
3 = Ulcerated or bleeding									
Tongue									
1 = Pink, moist, papillae present									
2 = Coated or loss of papillae									
3 = Blistered or cracked									
Mucous Membrane									
1 = Pink and moist									
2 = Reddened or coated									
3 = Ulcerated +/- bleeding									
Saliva (Consistency)									
1 = Watery									
2 = Thick									
3 = Absent									
Teeth (if no teeth, score 1)									
1 = Clean & no debris									
2 = Localised plaque or debris									
3 = Generalised plaque / debris									
Gingiva / Gums									
1 = Pink & moist									
2 = Oedematous / redness									
3 = Spontaneous bleeding									
Candida (Thrush)									
1 = No									
3 = Yes									
Pain									
1 = No pain									
2 = Mild Pain									
3 = Severe Pain									
Oral Cavity Total Score									
Grade 1 = Score 11 - 14		Grade 2 = Score 15 - 19			Grade 3 = Score 20 - 24			Grade 4 = Score 25 - 30	

Adapted from Eilers et al 1988

Reference: Supportive Care Guidelines Haematology Oncology (OLCHC (2013)

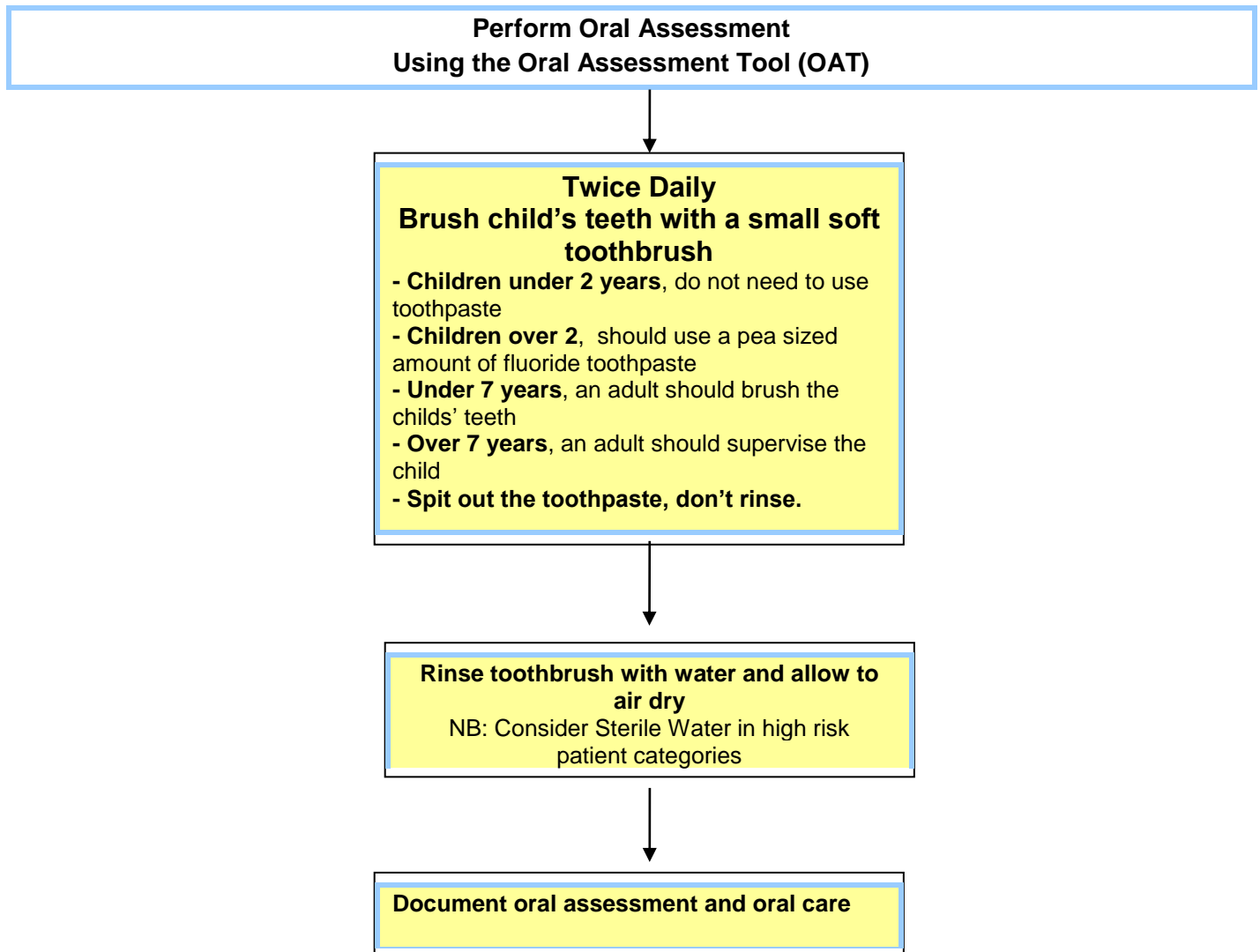
Created by Oral Assessment Team – CHI at Crumlin, Dublin 12 – Issue Date: 20.10.20

Appendix 4 - Mucositis Grading Scale

Healthy Mouth: The mouth is pink and healthy, no lesions present, no bleeding and the mucosa is moist.

Grade	Description	Action
Grade 0	Normal mouth	Oral hygiene as for age BD Oral assessment BD
Grade 1	Erythema of oral mucosa. May have some pain / discomfort	Oral hygiene as for age BD Oral assessment BD Assess pain score Administer analgesia as required (PO/NG)
Grade 2	Isolated small ulcerations Mucosa may bleed on probing Saliva is thicker than normal Patient may only be able to tolerate bland food but can drink as normal	Oral hygiene as for age BD Oral Assessment BD Assess pain score Administer analgesia as required (PO / NG / NCA / PCA) Dental review as required Monitor intake and output Monitor full blood count
Grade 3	Ulcers and extensive erythema White patches covering more than 25% of oral mucosa Unable to swallow solid diet Saliva thick and ropey Hoarse / raspy voice Moderate / severe pain	Oral hygiene as for age BD as tolerated Oral assessment BD Assess pain score Administer analgesia (NG / IV) Dental review Monitor intake and output Assess nutrition / hydration
Grade 4	Haemorrhagic ulceration Cannot swallow saliva / drooling Severe pain Unable to eat or drink Hoarse / raspy voice	Oral hygiene as for age BD as tolerated Oral assessment BD Assess pain score Administer analgesia (PCA/ NCA) Dental review Monitor intake and output Assess nutrition / hydration
Oral hygiene		Age related
Children > 2years		Clean teeth at least twice daily using soft toothbrush and fluoride toothpaste (full strength 1450ppmF). Children < 7 years , parents should supervise brushing, and should brush child's teeth on one occasion during the day.
Children < 2 years		Parent / carer brushes child's teeth twice daily with soft wet toothbrush (no toothpaste)
Babies without teeth		Parent / carer cleans mouth with moist gauze (water) if needed

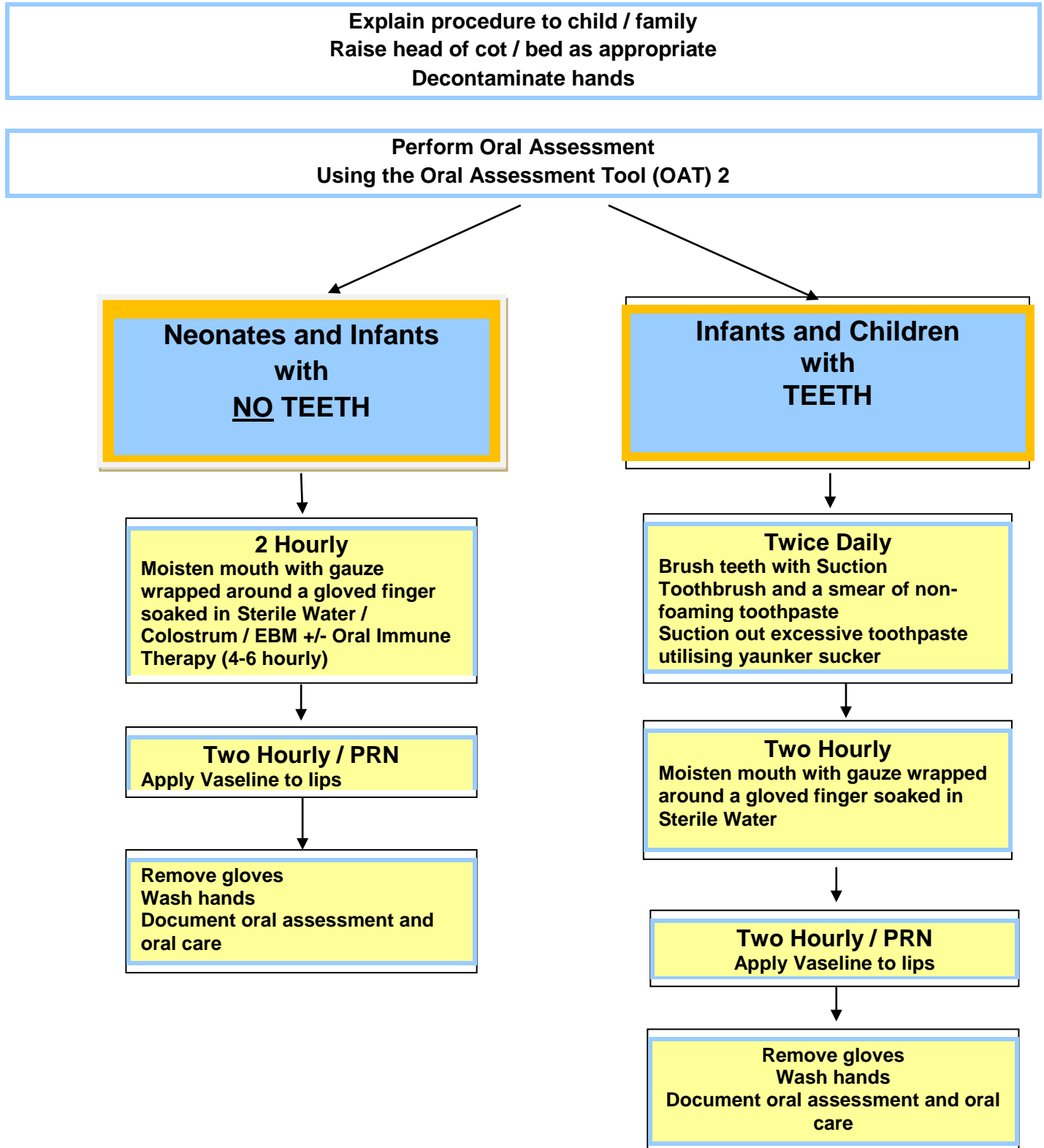
Appendix 5 - Oral Hygiene: Nursing Guideline for Children




Adapted from Johnson *et al.* 2010 (OLCHC 2015)

Appendix 6 - Algorithm PICU Infant / Child

Oral Hygiene in the PICU: Guideline for Intubated Infants / Children or With a Lowered Glasgow Coma Scale



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- Nurse Practice Committee members.
- Miss Kirsten FitzGerald, Consultant Paediatric Dental Surgeon.

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